

## INTERNATIONAL SEARCH REPORT

PCT/IB2004/003373

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K39/095 A61K39/1  $\Theta$  A61K39/09

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal , WPI Data, BIOSIS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category <sup>e</sup>	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>VEGA MASIGNANI ET AL. : "Vacci nati on agai nst Neisseri a meningi tidis usi ng three vari ants of the lipoprotei n GNA187<math>\Theta</math>" JOURNAL OF EXPERIMENTAL MEDICI NE, vol . 197, no. 6, 17 March 2003 (2003-03-17), pages 789-799, XP002286107</p> <p>page 790, left-hand column, paragraph 2 - paragraph 3</p> <p>page 793, left-hand column, paragraph 2 - paragraph 2</p> <p>page 797, right-hand column, paragraph 2</p> <p>-----</p> <p>-/-</p>	1-17

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

15 April 2005

Date of mailing of the international search report

19 -08- 2005

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	MARIAGRAZIA PIZZA ET AL. : "Identi f icati on of vacci ne candi dates against serogroup B meningococcus by whol e-genome sequenci ng" SCI ENCE , vol . 287, 10 March 2000 (2000-03-10) , pages 1816-1820, XP000914964 page 1816, mi ddle col umn, paragraph 1 - page 1819, mi ddl e col umn, paragraph 1 -----	1-17
Y	JEANNETTE ADU-BOBI E ET AL. : "Two years into reverse vacci noi ogy" VACCINE, vol . 21, January 2003 (2003-01) , pages 605-610, XP004401591 page 606, left-hand col umn, paragraph 3 - page 608, left-hand column, paragraph 3 -----	1-8, 10-17
Y	MARIROSA MORA ET AL. : "Reverse vacci nol ogy" DRUG DISCOVERY TODAY, vol . 8, no. 10, May 2003 (2003-05) , pages 459-464, XP002324779 page 461 , right-hand col umn, last paragraph - page 462, left-hand col umn, paragraph 1 -----	1-6, 10-17
Y	wo 02/058737 A (AVENTIS PASTEUR) 1 August 2002 (2002-08-01) the whole document -----	1-17
Y	wo 03/020756 A (CHIRON SPA) 13 March 2003 (2003-03-13) the whole document -----	9
A	wo 99/42130 A (CONNAUGHT LABORATORIES LIMITED) 26 August 1999 (1999-08-26) page 3, line 8 - page 9, line 9 page 9, line 30 - page 12, line 15 -----	1-17
A	MICHAEL BRÖKER: "Development of new vaccines against meningococcal disease" ARZNEIMITTEL-FORSCHUNG, vol . 53, no. 12, 2003, pages 805-813, XPO08045729 page 808, left-hand col umn, paragraph 3 - page 809, right-hand column, paragraph 2 page 811 , right-hand col umn, paragraph 1 - page 812, left-hand col umn, paragraph 2 -----	1-17

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>LUIS JODAR ET AL.: "Development of vaccines against meningococcal disease" THE LANCET, vol. 359, 27 April 2002 (2002-04-27), pages 1499-1508, XP004792462</p> <p>page 1501, left-hand column, paragraph 1 -</p> <p>page 1502, left-hand column, paragraph 1</p> <p>page 1505, left-hand column, paragraph 1 -</p> <p>paragraph 2</p> <p>-----</p>	1-17
P,X	<p>WO 2004/067030 A (CHIRON SRL) 12 August 2004 (2004-08-12)</p> <p>page 1, line 30 - page 19, line 26</p> <p>page 26, line 1 - page 27, line 29</p> <p>page 34, line 8 - page 35, line 5</p> <p>-----</p>	1-17
P,X	<p>WO 2004/032958 A (CHIRON SRL) 22 April 2004 (2004-04-22)</p> <p>page 2, line 1 - page 8, line 26.</p> <p>page 10, line 30 - line 34</p> <p>page 11, line 23 - page 12, line 26</p> <p>page 14, line 9 - line 19</p> <p>page 18, line 32 - page 30, line 9</p> <p>page 31, line 20 - page 33, line 19</p> <p>page 37, line 27 - page 38, last line</p> <p>-----</p>	1-17
P,X	<p>WO 2004/067033 A (CHIRON SRL) 12 August 2004 (2004-08-12)</p> <p>page 1, line 27 - page 2, line 27</p> <p>page 3, line 15 - page 8, line 9</p> <p>page 10, line 33 - page 12, line 5</p> <p>page 12, line 30 - page 14, line 23</p> <p>-----</p>	1-3,5-8, 10-17
P,X	<p>WO 03/094834 A (UNIVERSITEIT LEIDEN) 20 November 2003 (2003-11-20)</p> <p>page 1, paragraph 7 - page 2, paragraph 9</p> <p>page 3, paragraph 4 - page 8, paragraph 2</p> <p>page 10, paragraph 8 - page 12, paragraph 3</p> <p>page 13, paragraph 4 - page 14, paragraph 5</p> <p>5</p> <p>-----</p>	1-3,5-8, 10-17

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons

- 1 ☐ Claims Nos  
because they relate to subject matter not required to be searched by this Authority, namely
- 2 ☒ Claims Nos  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically
- 3 ☐ Claims Nos  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6 4(a)

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows

see additional sheet

- 1 ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims
- 2 ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee
- 3 ☐ As only some of the required additional search fees were timely paid by the applicant this International Search Report covers only those claims for which fees were paid, specifically claims Nos
- 4 ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims, it is covered by claims Nos

1-17

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest
- ☐ No protest accompanied the payment of additional search fees

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-17

Immunogenic composition comprising a conjugated capsular saccharide antigen of each serogroup c, W135 and y, and one or more polypeptide antigens from serogroup B

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2. claims: 18-20

Immunogenic composition comprising a conjugated serogroup W135 capsular saccharide antigen and a conjugated H. influenza type b capsular saccharide antigen.

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